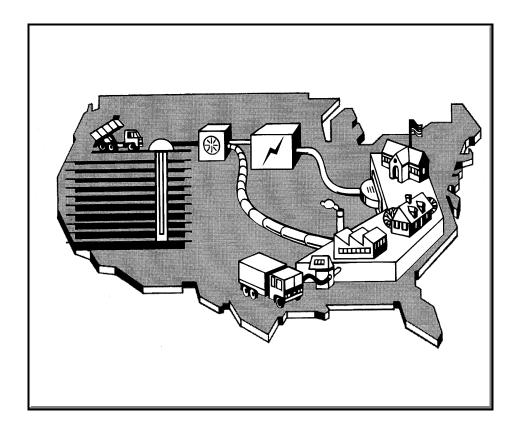


Landfill Gas-to-Energy Project Opportunities

Landfill Profiles for the State of Virginia





EPA Landfill Methane Outreach Program



The EPA Landfill Methane Outreach Program, a key component of the United State's *Climate Change Action Plan*, encourages the use of landfill gas (LFG) as an energy resource. EPA assists utilities,

municipal and private landfill owners and operators, tribes, and state agencies in reducing methane emissions from landfills through the development of profitable landfill energy recovery projects. Methane captured from landfills can be transformed into a cost-effective fuel source for electricity, heat, boiler and vehicular fuel, or sale to a pipeline. EPA estimates there are approximately 200 landfill methane recovery projects in the U.S. and that up to 750 landfills could install economically viable landfill energy projects.

The Landfill Methane Outreach Program includes five important components: the State Ally, Energy Ally, Industry Ally, Community Partner, and Endorser programs. EPA establishes separate alliances with state agencies, energy providers (including investor-owned, municipal and other public power utilities and cooperatives), key trade and public sector associations, members of the landfill gas development industry (including developers, engineers, equipment vendors, and others) and local communities, municipalities and landfill owner/operators through a Memorandum of Understanding (MOU). By signing the MOU, each Ally/Partner acknowledges a shared commitment to the promotion of landfill gas-to-energy recovery at solid waste landfills, recognizes that the widespread use of landfill gas will reduce emissions of methane and other gases, and commits to undertake activities to enhance development of this resource. In return, EPA agrees to provide landfill gas-to-energy project assistance and public recognition of the Allies' and Partners' participation in the program.

Introduction

Since 1994 the U.S. EPA's Landfill Methane Outreach Program (LMOP) has participated in an ongoing effort to gather information on Municipal Solid Waste landfills (MSW). A key component of the LMOP is to provide MSW landfill owners and operators, project developers, utilities, and other potential project participants with information on MSW landfills that may offer attractive energy development opportunities. This document presents state specific landfill information, hereinafter referred to as the landfill profiles. These profiles are useful to evaluate the potential for developing landfill gas-toenergy projects (LFGTE). EPA assembled this information from state and local sources as well as various national solid waste publications, landfill owners and operators, and project developers.

The EPA has prepared a separate document to describe the methodology used to develop the state-specific landfill profiles and estimate the benefits of using LFGTE as an energy source. The document, Landfill Gas-to-Energy Project Opportunities, Background Information on Landfill Profiles, contains background information on gas collection and use, describes the data fields according to the five sections listed on the landfill profiles, and where applicable, illustrates calculations and default values used to derive estimates. EPA strongly recommends that users read the document prior to using the landfill profiles. Users can obtain the document by calling the LMOP hotline at 1-888-STAR-YES.

Data Sources

- EPA-ORD Landfill Gas Utilization-Survey (Thorneloe, 1997)
- Directory and Atlas of Solid Waste Disposal Facilities (SWA, 1994)
- Implementation Guide for Landfill Gas Recovery Projects in the Northeast (SCS, 1994)
- Landfill Gas-to-Energy 1994-1995 Activity Report (SWT, 1994)
- Methane Recovery from Landfill Yearbook (GAA, 1994)
- · Project developers, landfill owners, and operators
- · State and local records
- · Survey of Landfill Gas Generation Potential (EPRI, 1992)
- U.S. Landfill Directory (SWANA, 1992)

Landfill Classification

To facilitate the use of available landfill information, EPA has categorized the landfills into five categories: Current Project, ¹ Candidate Project, Shutdown, Other, and Unknown waste-in-place (WIP). These categories are based on the status of the landfill's LFGTE project(s) and WIP. The generation of methane is a function of many factors, the most critical being the amount of waste-in-place and the number of years the waste has been in the landfill. Peak methane generation occurs soon after closure; therefore, the longer the landfill has been closed, the less attractive it becomes for methane recovery. Based on the general timing of peak methane generation, EPA assumes that landfills that ceased accepting waste prior to 1993 have a low probability of generating enough methane to make a gas recovery project economical. Consequently, landfills need to be operating in 1993 to be considered as having a Candidate Project.

Landfill Categorizes

Current Project:

 Landfill with operational LFGTE project or landfill with LFGTE project under construction.

Candidate Project:

- Landfill with a potential or planned LFGTE utilization project; or
- Landfill is currently operating or closed after 1993; and has more than 1,000,000 tons of municipal solid waste-inplace.²

Shutdown:

· Landfill with shutdown LFGTE project.

Other

 Landfill has less than 1,000,000 tons of municipal solid waste-in-place with no current or planned LFGTE project.

Unknown WIP:

 Landfill with insufficient data to determine the waste-inplace

State Summary

State-specific landfill profile information is summarized in three exhibits. Exhibit 1 presents a summary of the state-specific potential for LFG utilization energy by landfill category. Exhibit 2 summarizes the emissions avoided by fossil fuel displacement for electricity generation and direct use projects. Exhibit 3 presents an index of the state-specific MSW landfills, referenced by category, landfill name and general characteristics.

² By modeling the relationship between WIP and methane generation, a cut-off of 1,000,000 tons of WIP was established; landfills having at least 1,000,000 tons of WIP are considered candidate landfills.



¹ Current projects illustrate the wide range of successful project development options.

Exhibit 1: Virginia MSW Landfill Summary

Category	No. of	Est. Capacity Potential		Est. CH4	Methane F		CO2 Equivalent of CH4		
	Landfills	Electricity (MW)	Gas Capacity (mmBtu/hr)	Generation (mmscf/d)	(ton:	s/yr)	Reduction (tons/yr)		
					Potential	Current	Potential	Current	
Current	9	69	688	22	127,272	44,865	2,672,702	942,167	
Candidate	17	57	570	18	105,463	5,782	2,214,729	121,414	
Shutdown	2	3	26	1	4,789	5,011	100,559	105,227	
Other	6	2	24	1	4,388	0	92,148	0	
Unknown WIP	6								
Total	40	131	1,308	42	241,911	55,658	5,080,137	1,168,808	

Exhibit 2: Potential Virginia Emissions Avoided by Fossil Fuel Displacement

Category		Electricity Generation Project						Direct Use Project					
	CC	CO2 (tons/yr)		SC	SO2 (tons/yr)		CO2 (tons/yr)			SO2 (tons/yr)		yr)	
	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	
Current	543,811	446,336	300,122	3,437	2,873	0	383,261	314,563	211,516	3,487	1,833	2	
Candidate	449,098	368,599	247,851	2,839	2,372	0	317,588	260,662	175,273	2,890	1,519	2	
Shutdown	20,521	16,843	11,325	130	108	0	14,420	11,835	7,958	131	69	0	
Other	18,153	14,899	10,019	115	96	0	13,214	10,846	7,293	120	63	0	
Unknown WIP													
Total	1,031,584	846,677	569,318	6,520	5,450	0	728,483	597,906	402,040	6,629	3,484	4	

Exhibit 3: Index of Landfills in Virginia

0-1	Landfill Mana			OI Landinis			1.50	Ctatus of LEOTE
Category	Landfill Name	WIP			Landfill Operating in	LFG Collected	LFG Utilization	Status of LFGTE Project
		<2.5 million tons	2.5 to 4 million tons	>4 million tons	1998		Project	Project
Current	1-95 Lorton LF			V			✓	Operational
Current	1-95 Lorton LF			✓			✓	Operational
Current	1-95 Lorton LF			✓		✓	✓	Operational
Current	Big Bethel LF				✓			Construction
Current	Big Bethel LF				✓		✓	Operational
Current	Independent Hill LF Prince William				✓			Construction
Current	Old Dominion Landfill					✓	✓	Operational
Current	SPSA Regional LF			✓	✓		✓	Operational
Current	SPSA Regional LF			✓	✓	✓	✓	Operational
Candidate	Albemarle Ivy SF		✓		✓			Potential
Candidate	Atlantic Waste Disposal SLF							Potential
Candidate	Charles City County SLF			V	✓			Planned
Candidate	Danville City SLF		✓		✓			Potential
Candidate	Frederick County Winchester SLF		✓		✓			Potential
Candidate	Greene County							Planned
Candidate	Loudoun County LF	✓			✓			Unknown
Candidate	Lynchburg City LF	✓						Planned
Candidate	Maplewood Recycling and Waste Dispo			✓	✓			Planned
Candidate	Martinsville City LF	✓			✓			Potential
Candidate	Newport News LF	✓						Unknown
Candidate	Newport News Solid Waste Disposal F	✓						Planned
Candidate	Nuckols Road LF		✓			✓		Planned
Candidate	Petersburg City LF	✓			✓			Unknown
Candidate	Shoosmith Richmond Area LF		✓		✓			Planned
Candidate	Smith Gap Regional Landfill			✓				Potential
Candidate	Virginia Beach LF #2 Mount Trashmore			✓	✓	✓		Planned
Shutdown	Carver Heights Landfill Gas Project	✓				✓		Shutdown
Shutdown	Dinwiddie County Landfill Gas Project	✓				✓		Shutdown
Other	Bedford City Hylton Site	✓			✓			Unknown
Other	Bedford County SLF	✓			✓			Unknown
Other	Chesterfield County Northern Area LF	✓			✓			Unknown
Other	Franklin County SLF	✓			✓			Unknown
Other	Orange County LF	✓			✓			Unknown
Other	Stafford County LF	✓			✓			Unknown
Unknown WIP	Amelia County SLF				✓			Unknown
Unknown WIP	Frederick County SLF				✓			Unknown
Unknown WIP	Lynchburg City SLF				✓			Unknown
Unknown WIP	Madison District LF				✓			Unknown
Unknown WIP	Rutrough Road Landfill							Unknown

Exhibit 3: Index of Landfills in Virginia

Category	Landfill Name	WIP			Landfill	LFG Collected	_	Status of LFGTE
		<2.5 million tons	2.5 to 4 million tons	>4 million tons	Operating in 1998		Utilization Project	Project
Unknown WIP	Woods Road SLF				✓			Unknown

VA - 4 December 05, 1998

			1-95 Lorton LF	1		Landfill Category:	Current
		A. G	ENERAL LANDFILL IN		N	Lunajiii Calegory.	Current
1 1011 0		71. 0					206,000
Landfill Owner:	D.J.I.			-	nce Rate (tons):		286,000
Landfill Owner Type:	Public	D			ceptance Rate Repo	orted:	
Alternative Landfill Nar	me: 195 Ke Fairfax	source Recover		Design Capacity (tons): Carces Currently Landfilled (acres):			200
City:	Fairtax Fairfax			-			300
County:				rage Depth (f			100
State:	VA 1973			ste-in-Place (t			20 024 122
Year Open: Year Closed:			199	8 Waste-in-Pi	iace (ions):		29,034,133
rear Closed:	1995		B. LANDFILL GAS COLI	ECTION			
			b. LANDFILL GAS COLI				
Estimated Methane Gen		f/d):		7.84			
LFG Collection System			Opera				
Current LFG Collected				3.3			
Collection and Treatmen	nt System Requ			No			
			C. LANDFILL GAS UTIL	IZATION			
Current Utilization:							
Utilization System	Status:	Operational					
Utilization System	Type:	Reciprocation	ng Engine				
Utilization System	Start Year:	1991					
Electric Utility Pro	vider(s):						
Natural Gas Provid	ler(s):						
Energy Purchaser(s	s):	Virginia Ele	ctric & Power Co				
Capacity:		Electric	ty Generation Project (MW	OR	Direct U	Jse Project (mmBtu/h	r)
Estimated Potentia	l Capacity:			25			245
Current Capacity:				3.2			69
Planned Capacity:							
Utilities in County:		Northern Vi	rginia Elec Coop; Southeast	ern Power Ac	dmin; Virginia Elec	ctric & Power Co	
•			RONMENTAL BENEFITS				
			Poten	tial		Current	
Methane Reduction (ton	(s/vr)·		1 oten		5,352	Current	12,720
CO2 Equivalent of CH4	• •	ns/vr)·			2,394		267,110
EGZ Equivalent of CIT	Treassesson (10)				2,371		
Emissions Avoided by F	ossil Fuel Disp	placement:	Electricity Genera	tion Project		Direct Use Projec	et .
			CO2 (tons/yr)	SO2 (tons/	(yr) CO	2 (tons/yr) So	O2 (tons/yr)
		Coal:	193,373	1,2	222	136,572	1,243
l		Fuel Oil:	158,712	1,0)22	112,092	653
	N	latural Gas:	106,720		0	75,372	1
			E. CONTACT INFORM	IATION			
		Landfill	Owner		Landf	ill Operator	
Contact Name:	Earl Delauder						
'							
Mailing Address:	9850 Furnace I	Road			Sovernment Center	Pkwy	
				Suite 32	4		
Phone Number:	703-690-1703			703-690	-1525		
Fax Number:							
				1			

Page:



			1-95 Lorton L	F		Landfill Ca	tegory:	Current
		A. Gl	ENERAL LANDFILL IN	FORMAT	TON			
Landfill Owner:			Ar	nual Accep	otance Rate (to	ons):		286,000
Landfill Owner Type:	Public		Ye	ar Annual A	Acceptance R	ate Reported:		1998
Alternative Landfill N	ame: I 95 Re	source Recovery	LF De	sign Capac	ity (tons):			
City:	Fairfax		Ac	Acres Currently Landfilled (acres):				300
County:	Fairfax		Av	erage Dept	h (feet):			100
State:	VA		19	998 Waste-i	n-Place (tons)):	18	,072,000
Year Open:	1973		19	98 Waste-ir	n-Place (tons)	:	18	,072,000
Year Closed:	1995							
		F	3. LANDFILL GAS COL	LECTION	I			
Estimated Methane Ge	eneration (mmsc	f/d):		5.04				
LFG Collection System								
Current LFG Collected				1.44				
Collection and Treatm	ent System Requ	uired Under NSP	S/EG:	No				
			C. LANDFILL GAS UTI	LIZATION	N			
Current Utilization:								
Utilization Syster	n Status:	Operational						
Utilization System		Direct Thern	nal					
Utilization System		1997	iai					
Electric Utility P		1777						
Natural Gas Prov								
Energy Purchaser		Virginia Fla	etric & Power Co					
Energy i dichasei	(3).	V II giiii a Liec	cure & rower co					
Capacity:		Electricit	y Generation Project (MV	V) (OR	Direct Use Project (mr	nBtu/hr)	
Estimated Potent	ial Capacity:			16				158
Current Capacity:	:							30
Planned Capacity	:							
Utilities in County:		Northern Vir	ginia Elec Coop; Southeas	stern Power	Admin; Virg	inia Electric & Power (Со	
		D. ENVIR	ONMENTAL BENEFIT	TS OF UTI	LIZATION			
			Pote			Curr	ent	
 Methane Reduction (to	ons/vr)·		T Oic.	riiiii	29,141	Cuii	Citt	5,550
CO2 Equivalent of CH	• .	ns/vr)·			611,969			116,556
EO2 Equivalent of CII	Treduction (to	1137 y 1).			011,505			110,330
Emissions Avoided by	Fossil Fuel Disp	placement:	Electricity Gener	ation Proje	ct	Direct Use	Project	
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2	(tons/yr)
		Coal:	124,706		788	87,755		799
		Fuel Oil:	102,353		659	72,026		420
	N	latural Gas:	68,823		0	48,431		0
			E. CONTACT INFOR	MATION		<u> </u>		
		Landfill (Landfill Operator		
Contact Name:	Earl Delauder					*		
M-:1: A 1 1		D J		1200	0 C	t Cantan Dla		
Mailing Address:	9850 Furnace l	Koad		Suite		t Center Pkwy		
Phone Number:	703-690-1703			703-6	590-1525			
Fax Number:								

^{*} Itallicized indicates values estimated by EPA.

STAR Version 1.0 / LMOP

			1-95 Lorton	LF		Landfill C	'ategory:	Current
		A. G	ENERAL LANDFILL I		ION			
Landfill Owner:			Δ	Annual Accen	tance Rate (tons):		286,000
Landfill Owner Type:	Public			Annual Acceptance Rate (tons): Year Annual Acceptance Rate Reported:				1998
Alternative Landfill N		esource Recovery		Design Capacity (tons):				1770
City:	Fairfax	-		Acres Currently Landfilled (acres):				300
County:	Fairfax			verage Depth	-	a (acres).		100
State:	VA	•		1998 Waste-ir		s):	1	8,072,000
Year Open:	1973			998 Waste-in		,		8,072,000
Year Closed:	1995				(-,-		-,-,-,
]	B. LANDFILL GAS CO	LLECTION				
Estimated Methane Ge	eneration (mmsc	:f/d):		5.04				
LFG Collection System	n Status:							
Current LFG Collected	d (mmscf/d):			3.3				
Collection and Treatm	ent System Req	uired Under NSF	PS/EG:	No				
			C. LANDFILL GAS UT	TLIZATION				
Current Utilization:								
Utilization Syster	n Status:	Operational						
Utilization Syster		Reciprocatin	ng Engine					
Utilization Syster		1993						
Electric Utility Pr								
Natural Gas Prov								
Energy Purchaser	c(s):	Virginia Ele	ctric & Power Co					
Conscitus		Electrici	ty Generation Project (M	W) ()R	Direct Use Project (n	nmDtu/he	\
Capacity:		Electrici	ty Generation Project (M)K	Direct Use Floject (I	IIIIiDtu/III ,	
Estimated Potent				16				158
Current Capacity				3.2				69
Planned Capacity	:							
Utilities in County:		Northern Vi	rginia Elec Coop; Southe	astern Power	Admin; Vir	ginia Electric & Power	r Co	
		D. ENVII	RONMENTAL BENEF	ITS OF UTII	LIZATION			
			Por	tential		Cu	rrent	
 Methane Reduction (to	ons/yr):				29,141			12,720
CO2 Equivalent of CH	- ·	ns/yr):		(511,969			267,110
Emissions Avoided by	Fossil Fuel Disp	placement:	Electricity Gene	=		Direct Us	•	
			CO2 (tons/yr)	SO2 (tor	ıs/yr)	CO2 (tons/yr)	SO	2 (tons/yr)
		Coal:	124,706		788	87,755		799
		Fuel Oil:	102,353		659	72,026		420
	Λ	latural Gas:	68,823		0	48,431		0
			E. CONTACT INFOI	RMATION				
		Landfill				Landfill Operator		
Contact Name:	Earl Delauder							
Mailing Address:	9850 Furnace	Dond		12000	Gorrama -	nt Cantar Dlave		
Mailing Address:	Poso Furnace	Noau		Suite		nt Center Pkwy		
DI N. I								
Phone Number:	703-690-1703			703-6	90-1525			
Fax Number:								

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page:

3



Albemarle Ivy SF Landfill Category: Candidate

A. GENERAL LANDFILL INFORMATION

Landfill Owner: Annual Acceptance Rate (tons): 104,962

Landfill Owner Type: Public Year Annual Acceptance Rate Reported:

Alternative Landfill Name: Rivanna Solid Waste Authority LF Design Capacity (tons):

City: Charlottesville Acres Currently Landfilled (acres):

County: Albemarle Average Depth (feet):

State: VA Waste-in-Place (tons): 2,519,088 2,519,088

Year Open: 1973 1998 Waste-in-Place (tons):

Year Closed: 2013

B. LANDFILL GAS COLLECTION

1.06 Estimated Methane Generation (mmscf/d):

LFG Collection System Status: Current LFG Collected (mmscf/d):

Collection and Treatment System Required Under NSPS/EG: No

C. LANDFILL GAS UTILIZATION

Current Utilization:

Utilization System Status: Potential Utilization System Type: Unknown

Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):

Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)

Estimated Potential Capacity: **Current Capacity:**

Planned Capacity:

Utilities in County:

Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E

3

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

Landfill Owner

	Pote	ential	Current		
Methane Reduction (tons/yr):		6,142		0	
CO2 Equivalent of CH4 Reduction (tons/yr):		128,978		0	
Emissions Avoided by Fossil Fuel Displacement:	Electricity Gener	ration Project	Direct Use Project		
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)	
Coal:	26,046	165	18,495	168	
Fuel Oil:	21,378	138	15,180	89	
Natural Gas:	14,375	0	10,207	0	

E. CONTACT INFORMATION

Contact Name:	Steve Chitzy	Leonard Walker
Mailing Address:	401 McIntyre Road	PO Box 979
Phone Number:	804-977-2970 ext. 129	804-977-2976

* Itallicized indicates values estimated by EPA.

Fax Number:

December 5, 1998

State: VA

Landfill Operator

Page:

33

Atlantic Waste Disposal SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Atlantic Waste Disposal Annual Acceptance Rate (tons): Landfill Owner Type: Private Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): 1,559,688 City: Sussex Acres Currently Landfilled (acres): 206 County: Sussex Average Depth (feet): State: VA Waste-in-Place (tons): Year Open: 1991 1998 Waste-in-Place (tons): Year Closed: 1996 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Potential Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: Current Capacity: Planned Capacity: Community Electric Cooperative; Mecklenburg Electric Coop; Prince George Electric Coop; Southeas Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: Fuel Oil: Natural Gas: E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Carlton Duddings Mailing Address: 4451 Crossings Boulevard 3474 Atlantic Lane Phone Number: 804-748-8690 804-834-8300 Fax Number:



Big Bethel LF Landfill Category: Current A. GENERAL LANDFILL INFORMATION Landfill Owner: WMI Annual Acceptance Rate (tons): Landfill Owner Type: Private Year Annual Acceptance Rate Reported: Alternative Landfill Name: Big Bethel LF Big Bethel LF SLF Incorporat Design Capacity (tons): City: Newport News Acres Currently Landfilled (acres): 316 County: Hampton Average Depth (feet): State: VA Waste-in-Place (tons): Year Open: 1988 1998 Waste-in-Place (tons): Year Closed: 2000 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Operational Utilization System Type: Leachate Evaporation Utilization System Start Year: 1997 Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: Current Capacity: Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: Fuel Oil: Natural Gas: E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: M Freeman Mailing Address: 2972 Armistead Avenue 6201 Powers Ferry Road Suite 150 Phone Number: 804-766-1092 804-723-5273

* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 6



Fax Number:

Big Bethel LF Landfill Category: Current A. GENERAL LANDFILL INFORMATION Sanifill Landfill Owner: Annual Acceptance Rate (tons): Landfill Owner Type: Private 1998 Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Newport News Acres Currently Landfilled (acres): 316 County: Hampton Average Depth (feet): State: VA 1998 Waste-in-Place (tons): Year Open: 1988 1998 Waste-in-Place (tons): Year Closed: 2000 B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Construction Utilization System Type: Reciprocating Engine Utilization System Start Year: 1998 Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: Current Capacity: Planned Capacity: 0.095 Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: Fuel Oil: Natural Gas: E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: M Freeman Mailing Address: 2972 Armistead Avenue 6201 Powers Ferry Road Suite 150 Phone Number: 804-766-1092 804-723-5273 Fax Number:



			Carver Heights Landfill	Gas Project		Landfill Categor	y: Shutdown		
		A. G	ENERAL LANDFILL I	NFORMAT	ION				
Landfill Owner:	Chester	rfield County	A	nnual Accep	tance Rate ((tons):			
Landfill Owner Type:	Public		Year Annual Acceptance Rate Reported:						
Alternative Landfill Name:	Carver	Heights LF	D	Design Capacity (tons):					
City:	Chester	r	A	cres Current	y Landfille	d (acres):	86		
County:	Chester	rfield	A	verage Deptl	n (feet):		28		
State:	VA		1	994 Waste-in	n-Place (ton	s):	1,250,000		
Year Open:	1962		19	998 Waste-in	-Place (tons	s):	1,250,000		
Year Closed:	1990								
		I	B. LANDFILL GAS CO	LLECTION					
Estimated Methane Generation	n (mmsc	rf/d):		0.67					
LFG Collection System Status	s:		Ope	erational					
Current LFG Collected (mmsc	cf/d):			0.9					
Collection and Treatment Syst	tem Req	uired Under NSF	PS/EG:	No					
			C. LANDFILL GAS UT	ILIZATION	I				
Current Utilization:									
Utilization System Status	3:	Shutdown							
Utilization System Type:		Reciprocatin	g Engine						
Utilization System Start	Year:	1994							
Electric Utility Provider(s):								
Natural Gas Provider(s):									
Energy Purchaser(s):		Virginia Ele	ctric & Power Co						
		-					m .		
Capacity:		Electrici	ty Generation Project (M	W) (OR T	Direct Use Project (mmBtu	hr)		
Estimated Potential Capa	acity:			2			21		
Current Capacity:									
Planned Capacity:				1.6			19		
Utilities in County:		Southeastern	Power Admin; Southside	e Electric Co	op Inc; Virg	ginia Electric & Power Co			
		D. ENVIR	RONMENTAL BENEFI	TS OF UTI	LIZATION	I			
			Pote	ential		Current			
Methane Reduction (tons/yr):					3,869		3,469		
CO2 Equivalent of CH4 Reduc	ction (to	ns/yr):			81,249		72,849		
Emissions Avoided by Fossil I	Fuel Disp	placement:	Electricity Gene			Direct Use Proje			
			CO2 (tons/yr)	SO2 (to	ıs/yr)	CO2 (tons/yr)	SO2 (tons/yr)		
		Coal:	16,575		105	11,651	106		
		Fuel Oil:	13,604		88	9,563	56		
	λ	latural Gas:	9,147		0	6,430	0		
		dilli dus.	E. CONTACT INFOR	MATION		0,130			
		Landfill (WIATION		Landfill Operator			
Contact Name:									
Mailing Address:									
Phone Number:									
Fax Number:									
ψ I, II' ' I ' I' ' ' ' ' ' ' ' ' ' ' ' '		1 FD 4	-	1 7 100	.0	G			
* Itallicized indicates values es	stimated	by EPA.	Dec	ember 5, 199	8	State: VA Pag	ge: 8		

State: VA Page: * Itallicized indicates values estimated by EPA. December 5, 1998



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Charles City County SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 800,800 Landfill Owner Type: Private Year Annual Acceptance Rate Reported: Alternative Landfill Name: Chambers Charles City LF; Chambers LF; C Design Capacity (tons): City: Charles City Acres Currently Landfilled (acres): 294 County: Charles City Average Depth (feet): State: VA Waste-in-Place (tons): 6,406,400 Year Open: 1989 6,406,400 1998 Waste-in-Place (tons): Year Closed: 2011 **B. LANDFILL GAS COLLECTION** 2.06 Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Planned Unknown Utilization System Type:

Utilization System Start Year: 2000

Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):

Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 6 64 Current Capacity: Planned Capacity:

Southeastern Power Admin; Virginia Electric & Power Co Utilities in County:

D. ENVIRONMENTAL BENEFITS OF UTILIZATION										
	Pote	ntial	Current							
Methane Reduction (tons/yr):		11,890		0						
CO2 Equivalent of CH4 Reduction (tons/yr):		249,698		0						
Emissions Avoided by Fossil Fuel Displacement:	Electricity Gener	ation Project	Direct Use Project							
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)						
Coal:	50,514	319	35,806	326						
Fuel Oil:	41,459	267	29,388	171						
Natural Gas:	27,878	0	19,761	0						

E. CONTACT INFORMATION Landfill Owner Landfill Operator

Contact Name: Lee Wilson William Cooksey Mailing Address: 8000 Chambers Road 8000 Chambers Road Phone Number: 804-966-7146 804-966-7146 Fax Number:



Danville City SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 114,400 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): Danville Acres Currently Landfilled (acres): County: Danville Average Depth (feet):

Waste-in-Place (tons):

4

804-799-5100

1998 Waste-in-Place (tons):

2,745,600

2,745,600

35

10

Page:

Landfill Operator

State: VA

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d): 1.12

LFG Collection System Status: Current LFG Collected (mmscf/d):

Collection and Treatment System Required Under NSPS/EG: No

C. LANDFILL GAS UTILIZATION

Current Utilization:

City:

State:

Year Open:

Year Closed:

Utilization System Status: Potential Utilization System Type: Unknown

VA

1973

Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):

Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)

Estimated Potential Capacity: **Current Capacity:**

Planned Capacity:

Utilities in County:

Southeastern Power Admin

Landfill Owner

D. ENVIRONMENTAL BENEFITS OF UTILIZATION									
	Pote	ential	Current						
Methane Reduction (tons/yr):		6,477							
CO2 Equivalent of CH4 Reduction (tons/yr):		136,013	0						
Emissions Avoided by Fossil Fuel Displacement:	Electricity Generation Project		Direct Use	Project					
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)					
Coal:	27,625	175	19,504	178					
Fuel Oil:	22,673	146	16,008	93					
Natural Gas:	15,246	0	10,764	0					

E. CONTACT INFORMATION

Contact Name: Tom Spicer, City Manager Mailing Address: PO Box 3300 PO Box 3300

Phone Number: 804-799-5245 Fax Number:

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		I	Dinwiddie County Landf	ill Gas Projec	t	Landfill Cate	gory:	Shutdown
			ENERAL LANDFILL I	-				
Landfill Owner:	Dinwido	lie County	A	nnual Accept	ance Rate (tons):		
Landfill Owner Type:	Public		Y	ear Annual A	cceptance I	Rate Reported:		
Alternative Landfill Name:	Dinwidd	lie County LF	D	esign Capacit	ty (tons):			
City:	Dinwidd	lie	Acres Currently Landfilled (acres):					
County:	Dinwidd	lie	A	verage Depth	(feet):			30
State:	VA		1	994 Waste-in	-Place (tons	s):		450,000
Year Open:	1979		1.	998 Waste-in-	Place (tons	s):		450,000
Year Closed:	1994							
		В	. LANDFILL GAS CO	LLECTION				
Estimated Methane Generation	on (mmscf/	(/d):		0.16				
LFG Collection System Statu			Ope	erational				
Current LFG Collected (mms			0.4					
Collection and Treatment Sys	stem Requ	ired Under NSP	S/EG:	No				
		(C. LANDFILL GAS UT	ILIZATION				
Current Utilization:								
Utilization System Statu	ıs:	Shutdown						
Utilization System Type	e:	Reciprocating	g Engine					
Utilization System Start	Year:	1994						
Electric Utility Provider	r(s):							
Natural Gas Provider(s):	:							
Energy Purchaser(s):		Virginia Elec	tric & Power Co					
G		F1	G P 445	m) 0	.D	D' (II D ' (/	D: //	`
Capacity:		Electricit	y Generation Project (M	W) C	OR	Direct Use Project (mm	Btu/hr)
Estimated Potential Cap	pacity:			1				5
Current Capacity:								
Planned Capacity:				0.8				8
Utilities in County:		Prince Georg	e Electric Coop; Southea	stern Power A	Admin; Sou	thside Electric Coop Inc;	Virgin	ia Elec
		D. ENVIR	ONMENTAL BENEFI	TS OF UTIL	IZATION			
			Pot	ential		Curre	nt	
Methane Reduction (tons/yr):	:				920			1,542
CO2 Equivalent of CH4 Redu		s/yr):			19,310			32,378
		-			,			
Emissions Avoided by Fossil	Fuel Displ	lacement:	Electricity Gene	=		Direct Use I	-	
			CO2 (tons/yr)	SO2 (ton	s/yr)	CO2 (tons/yr)	SO	2 (tons/yr)
		Coal:	3,946		25	2,769		25
		Fuel Oil:	3,239		21	2,273		13
	No	utural Gas:	2,178		0	1,528		0
		uurui Gus.	E. CONTACT INFOR	MATION		1,320		
		Landfill C		WIATION		Landfill Operator		
Contact Name:		24				Banarii operator		
Mailing Address:								
Phone Number:				004 4	50 4545			
				804-40	59-4545			
Fax Number:								
				'				



Frederick County Winchester SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 121,550 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Winchester Acres Currently Landfilled (acres): County: Frederick Average Depth (feet): State: VA Waste-in-Place (tons): 3,160,300 Year Open: 1971 3,160,300 1998 Waste-in-Place (tons): Year Closed: 2013 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): 1.23 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Potential Utilization System Type: Leachate Evaporation Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 4 38 Current Capacity: Planned Capacity: Potomac Edison Co; Southeastern Power Admin Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION

Potential Current Methane Reduction (tons/yr): 7,090 0 CO2 Equivalent of CH4 Reduction (tons/yr): 148,892 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 29,993 190 21,351 194 Fuel Oil: 17,524 102 24,617 159 Natural Gas: 16,553 0 0 11,783 E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Ed Strawsynder, Director of Public Works	
Mailing Address:	107 North Kent Street	9 North Loudoun Street
		2nd floor
Phone Number:	703-667-2365	
Fax Number:		
Tax Number.		

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 12



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			Greene Count		Las	ndfill Category:	Candidata
		A. G	ENERAL LANDFILL IN	=	Lai	tajiti Category:	Candidate
I ICH O							
Landfill Owner:		County		nnual Acceptance Rat			
Landfill Owner Type: Alternative Landfill Na	Public Greene	County I E		ear Annual Acceptancesign Capacity (tons):			
Alternative Landiiii Na City:	Stanaro	County LF		eres Currently Landfi			
County:	Greene			verage Depth (feet):	ned (acres):		
State:	VA	,		aste-in-Place (tons):			
Year Open:	VA			aste-in-Flace (tolis). 98 Waste-in-Place (to	ona).		
Year Closed:			19	90 wasie-in-Flace (ii	ons).		
Teal Closed.			B. LANDFILL GAS COI	LECTION			
Estimated Methane Ger	nanation (mms.						
		:j/α).	ī	Planned			
LFG Collection System Current LFG Collected			1	ranned			
Collection and Treatme		uirad Undar NSI	DS/EC:	No			
Conection and Treatme	mi System Keq		C. LANDFILL GAS UTI				
C (IIII)			C. Emiliar IEE Gris C II				
Current Utilization:	C4-4	Dl					
Utilization System		Planned	E.				
Utilization System		Reciprocatii	ng Engine				
Utilization System		2000					
Electric Utility Pro							
Natural Gas Provi							
Energy Purchaser((s):						
Capacity:		Electric	ity Generation Project (MV	V) OR	Direct Use Pro	oject (mmBtu/hr	·)
Estimated Potentia	al Canacity:						
Current Capacity:	и Сирасиу.						
Planned Capacity:				.3			
Trainied Capacity.				.5			
Utilities in County:		Central Virg	ginia Electric Coop; Rappal	hannock Electric Coo	p; Southeastern Po	ower Admin; Vir	rginia E
		D. ENVII	RONMENTAL BENEFIT	TS OF UTILIZATION	ON		
			Pote	ntial		Current	
Methane Reduction (to	ns/vr):						
CO2 Equivalent of CH-	= :	ns/vr):					
Emissions Avoided by I	Fossil Fuel Dis	placement:	Electricity Gener	•		rect Use Project	
			CO2 (tons/yr)	SO2 (tons/yr)	CO2 (ton	s/yr) SO	2 (tons/yr)
		Coal:					
		Fuel Oil:					
	Λ	latural Gas:					
			E. CONTACT INFOR	MATION	·		
		Landfill	Owner		Landfill Ope	erator	
Contact Name:							
Mailing Address:							
<i>J</i>							
Phone Number:				804-985-7803			
				004-985-7803			
Fax Number:							



Independent Hill LF Prince William Landfill Category: Current A. GENERAL LANDFILL INFORMATION Landfill Owner: Prince William County Annual Acceptance Rate (tons): 171,600 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Prince William County LF Design Capacity (tons): City: Prince William Acres Currently Landfilled (acres): 860 County: Prince William Average Depth (feet): State: VA Waste-in-Place (tons): Year Open: 1971 1998 Waste-in-Place (tons): Year Closed: 2021 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Construction Utilization System Type: Reciprocating Engine Utilization System Start Year: 1998 Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Northern Virginia Electric Corp Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: Current Capacity: Planned Capacity: 1.6 Northern Virginia Elec Coop; Southeastern Power Admin; Virginia Electric & Power Co Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: Fuel Oil: Natural Gas: E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator		
Contact Name:	Thomas Smith	Thomas Smith		
Mailing Address:	4379 Ridgewood Center Drive	4379 Ridgewood Center Drive		
Phone Number: Fax Number:	703-792-6254	703-792-6254		



Loudoun County LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Loudon County Annual Acceptance Rate (tons): 57,200 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Acres Currently Landfilled (acres): 88 County: Loudoun Average Depth (feet): State: VA Waste-in-Place (tons): 1,487,200 Year Open: 1971 1998 Waste-in-Place (tons): 1,487,200 Year Closed: 2010 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): 0.80 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Unknown Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 3 25 Current Capacity: Planned Capacity: Northern Virginia Elec Coop; Southeastern Power Admin; Virginia Electric & Power Co Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 4,616 0 CO2 Equivalent of CH4 Reduction (tons/yr): 96,934 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 19,732 125 13,900 127 Fuel Oil: 104 16,195 11,409 67 Natural Gas: 0 0 10.890 7,671 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Richard S. Webber, Department Engineer Robert Montgomery Mailing Address: 750 Miller Drive 750 Miller Drive Suite 200 Suite 200 Phone Number: 703-771-5200 703-771-5200

* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 15



Fax Number:

Lynchburg City LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Lynchburg City Annual Acceptance Rate (tons): 85,800 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Lynchburg Acres Currently Landfilled (acres): County: Lynchburg Average Depth (feet): State: VA Waste-in-Place (tons): 1,544,400 1979 Year Open: 1,544,400 1998 Waste-in-Place (tons): Year Closed: 1995 **B. LANDFILL GAS COLLECTION** 0.81 Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Planned Direct Thermal Utilization System Type: Utilization System Start Year: 2000 Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Rock Tenn Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 3 25 **Current Capacity:** Planned Capacity: Utilities in County: Appalachian Power Company; Southeastern Power Admin D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	Pot	ential	Curr	ent				
Methane Reduction (tons/yr):		4,701		0				
CO2 Equivalent of CH4 Reduction (tons/yr):		98,711	0					
Emissions Avoided by Fossil Fuel Displacement:	Electricity Generation Project		Direct Use	Project				
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)				
Coal:	19,732	125	14,155	129				
Fuel Oil:	16,195	104	11,618	68				
Natural Gas:	10,890	0	7,812	0				
	E. CONTACT INFOR	RMATION						

		Landfill Owner	Landfill Operator
Contact Name:	, City Manager		

 Mailing Address:
 PO Box 60
 PO Box 60

 Phone Number:
 804-847-1659
 804-847-1659

 Fax Number:
 804-847-1659

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 16



		Maple	ewood Recycling and Was	ste Disposal l	Facility	Landfill Cate	egory: Candidate
		A. G	ENERAL LANDFILL I	NFORMAT	ION		
Landfill Owner:			A	nnual Accep	tance Rate (to	ons):	1,430,000
Landfill Owner Type:	Private		Y	ear Annual A	Acceptance Ra	ate Reported:	
Alternative Landfill N	ame: Chamb	ers Maplewood	RDF D	esign Capaci	ty (tons):		25,794,841
City:	Amelia	ı	A	cres Currentl	y Landfilled	(acres):	404
County:	Amelia	L	A	verage Deptl	n (feet):		
State:	VA			aste-in-Place			5,720,000
Year Open:	1993		19	998 Waste-in	-Place (tons).	•	5,720,000
Year Closed:	2011						
]	B. LANDFILL GAS CO	LLECTION			
Estimated Methane Ge	eneration (mmsc	f/d):		1.88			
LFG Collection System	m Status:						
Current LFG Collected							
Collection and Treatm	ent System Req			No			
			C. LANDFILL GAS UT	ILIZATION	I		
Current Utilization:							
Utilization System	m Status:	Planned					
Utilization Syster	n Type:	Unknown					
Utilization Syster	m Start Year:						
Electric Utility P							
Natural Gas Prov							
Energy Purchaser	r(s):						
Capacity:		Electrici	ty Generation Project (M	W) (OR	Direct Use Project (mm	Btu/hr)
Estimated Potent	ial Capacity:			6			59
Current Capacity							
Planned Capacity							
Halliain in Country		C414	. D A Ji C41 .: J	- El4-i- C-	T., _, W:,;	i- El-tri- & D C-	
Utilities in County:			Power Admin; Southside			na Electric & Power Co)
		D. ENVII	RONMENTAL BENEFI	TS OF UTII	LIZATION		
			Pote	ential		Curre	ent
Methane Reduction (to	ons/yr):				10,875		0
CO2 Equivalent of CH	14 Reduction (to	ns/yr):		2	228,381		0
Emissions Ausided by	Engail Eval Dia		Electricity Cons	nation Duoise	.4	Dinast Haad	Duningt
Emissions Avoided by	Fossii Fuei Disp	огасетепт:	Electricity Gene CO2 (tons/yr)			Direct Use I	=
			CO2 (lons/yr)	SO2 (to	is/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	46,567		294	32,750	298
		Fuel Oil:	38,220		246	26,879	157
	λ	latural Gas:	25,700		0	18,074	0
			E. CONTACT INFOR	MATION			·
		Landfill		WIATION		Landfill Operator	
Contact Name:	Lee Wilson	Editariii	Owner	Ronal	d Beaton	Eulidiii Operator	
Mailing Adding							
Mailing Address:	PO Box 168			PO B	ox 168		
Phone Number:	804-561-5787			804.5	61-5787		
	004-201-2/8/			004-3	01-3/0/		
Fax Number:							
L	I.						

17



Martinsville City LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 92,950 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Martinsville Acres Currently Landfilled (acres): County: Martinsville Average Depth (feet): State: VA Waste-in-Place (tons): 2,323,750 Year Open: 1972 1998 Waste-in-Place (tons): 2,323,750 Year Closed: **B. LANDFILL GAS COLLECTION** 1.01 Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Potential Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 3 32 Current Capacity: Planned Capacity: Southeastern Power Admin Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION

Potential Current Methane Reduction (tons/yr): 5,853 0 CO2 Equivalent of CH4 Reduction (tons/yr): 122,913 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 25,257 160 17,625 160 Fuel Oil: 20,730 133 14,466 84 Natural Gas: 13.939 0 0 9,727 E. CONTACT INFORMATION

Landfill Owner Landfill Operator

Jeff Joyce, City Manager

Mailing Address: PO Box 112 55 West Church Street

Phone Number: 540-656-5177

Fax Number:

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Contact Name:

			Newport News	LF		Landfill Cate	gory: Can	didate	
		A. G	ENERAL LANDFILL I	NFORMAT	ION				
Landfill Owner:	City of	Newport News	A	nnual Accep	otance Rate	(tons):		0	
Landfill Owner Type:	Public	Trempore Trems				Rate Reported:		1998	
Alternative Landfill Name: Design Capacity (tons):									
City:		rt News		cres Current	-	d (acres):		50	
County:				verage Dept	-	. (80	
State:	VA			998 Waste-i		as):	1,250	,000	
Year Open:	1984			1998 Waste-in-Place (tons): 1,250,000					
Year Closed:	1998								
]	B. LANDFILL GAS CO	LLECTION	I				
Estimated Methane Ge	neration (mmsc	f/d):		0.74					
LFG Collection System	n Status:								
Current LFG Collected	l (mmscf/d):								
Collection and Treatme	ent System Req	uired Under NSI	PS/EG:	No					
			C. LANDFILL GAS UT	ILIZATION	٧				
Current Utilization:									
Utilization System	n Status:	Unknown							
Utilization System	n Type:	Unknown							
Utilization System	n Start Year:								
Electric Utility Pr	ovider(s):								
Natural Gas Provi	ider(s):								
Energy Purchaser	(s):								
Capacity:		Electrici	ty Generation Project (MV	(X/)	OR	Direct Use Project (mm	Rtu/hr)		
		Electrici	ty Generation Project (M			Direct Ose Floject (IIIII			
Estimated Potenti				2				23	
Current Capacity:									
Planned Capacity	:								
Utilities in County:									
		D. ENVII	RONMENTAL BENEFI	TS OF UTI	LIZATION	Ī			
			Pote	ential		Curre	nt		
Methane Reduction (to	ons/yr):				4,265			0	
CO2 Equivalent of CH	- ·	ns/yr):			89,567			0	
Emissions Avoided by	Fossil Fuel Disp	placement:	Electricity Gene			Direct Use P	-		
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (ton	s/yr)	
		Coal:	18,153		115	12,844		117	
		Fuel Oil:	14,899		96	10,542		61	
	Λ	latural Gas:	10,019		0	7,088		0	
			E. CONTACT INFOR	RMATION					
		Landfill				Landfill Operator			
Contact Name:	David Sinclair			David	d Sinclair	Landfill Operator			
	David Sinclair				d Sinclair	<u> </u>			
Contact Name: Mailing Address:	David Sinclair 513 Oyster Poi				d Sinclair Dyster Point	<u> </u>			
Mailing Address:	513 Oyster Po			513 (Dyster Point	<u> </u>			
				513 (<u> </u>			



Newport News Solid Waste Disposal Facility No. 2 Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Annual Acceptance Rate (tons): 171,600 Year Annual Acceptance Rate Reported:

Design Capacity (tons): City: Newport News Acres Currently Landfilled (acres): Newport News Average Depth (feet):

County: 80 State: VA 1998 Waste-in-Place (tons): 1,250,000 1998 Waste-in-Place (tons): Year Open: 1984 1,250,000

Year Closed: 1996

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d): 0.74

Newport News City LF

LFG Collection System Status: Current LFG Collected (mmscf/d):

Collection and Treatment System Required Under NSPS/EG: No

C. LANDFILL GAS UTILIZATION

Current Utilization:

Landfill Owner:

Landfill Owner Type:

Alternative Landfill Name:

Utilization System Status: Planned

Utilization System Type: Reciprocating Engine

Public

Utilization System Start Year: 1999

Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):

Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) 2 Estimated Potential Capacity: 23 Current Capacity: Planned Capacity:

Southeastern Power Admin; Virginia Electric & Power Co Utilities in County:

D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 4,265 0 CO2 Equivalent of CH4 Reduction (tons/yr): 89,567 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 18,153 115 12,844 117 Fuel Oil: 14,899 96 10,542 61 Natural Gas: 10.019 0 7.088 0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator		
Contact Name:	David Sinclair, Solid Waste Administrator	David Sinclair		
Mailing Address:	2400 Washington Avenue	2400 Washington Avenue		
Phone Number:	804-249-5700	804-249-5700		
Fax Number:				

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA 20 Page:



			Nuckols Road LF		Landfill Cat	egory: Candidate		
		A. G	ENERAL LANDFILL INFO	ORMATION				
Landfill Owner:	Henric	o County	Annua	al Acceptance Rate ((tons):	114,400		
Landfill Owner Type:	Public		Year A	Rate Reported:				
Alternative Landfill N	ame: Spring	field Road LF #1	Design	Design Capacity (tons):				
City:	Richmo	ond	Acres	Currently Landfille	ed (acres):	92		
County:	Henrice	0	Avera	ge Depth (feet):		70		
State:	VA		1998	Waste-in-Place (ton	ns):	2,745,600		
Year Open:	1965		1998	Waste-in-Place (ton.	s):	2,745,600		
Year Closed:	1990							
]	B. LANDFILL GAS COLLE	CTION				
Estimated Methane Ge	eneration (mmsc	rf/d):	1	1.04				
LFG Collection System	n Status:		Operation	onal				
Current LFG Collected	l (mmscf/d):							
Collection and Treatm	ent System Req	uired Under NSI	PS/EG:	No				
			C. LANDFILL GAS UTILIZ	ZATION				
Current Utilization:								
Utilization Syster	n Status:	Planned						
Utilization Syster		Unknown						
Utilization Syster								
Electric Utility Pr								
Natural Gas Prov								
Energy Purchaser		Virginia Ele	ctric & Power Co					
Energy Turemuser	(5).	v ngima Bio	care as rower co					
Capacity:		Electrici	ty Generation Project (MW)	OR	Direct Use Project (mr	nBtu/hr)		
Estimated Potent	al Capacity:			3		32		
Current Capacity:								
Planned Capacity								
Utilities in County:		Southeastern	n Power Admin; Virginia Elec	tric & Power Co				
		D. ENVII	RONMENTAL BENEFITS (OF UTILIZATION	1			
			Potentia	ıl	Curr	ent		
Methane Reduction (to	ons/vr):			5,990		0		
CO2 Equivalent of CH	- ·	ns/vr):		125,782		0		
1								
Emissions Avoided by	Fossil Fuel Dis _l	placement:	Electricity Generation	n Project	Direct Use	Project		
			CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)		
		Coal:	25,257	160	18,037	164		
		Fuel Oil:	20,730	133	14,804	86		
	Λ	latural Gas:	13,939	0	9,954	0		
			E. CONTACT INFORMA	TION				
		Landfill		11011	Landfill Operator			
Contact Name:	Dim (D.1		- · · · - ·		operator			
	, Director Pub							
Mailing Address:	410 Dabbs Ho	use Road		Parham and Hung	gary Springe Rd			

Contact Name:

Mailing Address:

410 Dabbs House Road

Parham and Hungary Springs Rd
PO Box 27032

Phone Number:

804-672-4393

Fax Number:

Page:

21



			Old Dominion	n Landfill				Landfill Cate	gory.	Current
		A. G	ENERAL LANDFIL		MAT]	ION		Edinajiii Cuie	gory.	Current
Landfill Owner: Landfill Owner Type:	BFI Private			Annual A	Accept	tance Rate (tons): Rate Report	red:		
Alternative Landfill Na City:	ame: Richm Richm		Project; Richmond L	Design C	-	ty (tons): y Landfille	d (acres):			
County: State:	Henric VA	0		Average Waste-in						
Year Open:				1998 Wa	ste-in-	-Place (tons	s):			
Year Closed:		ī	B. LANDFILL GAS (COLLECT	rion.					
			D. LANDFILL GAS (COLLEC	HON					
Estimated Methane Ge		cf/d):		Omanationa	1					
LFG Collection Syster Current LFG Collected			,	Operationa 0.9						
Collection and Treatme		uirad Undar NCE	og/EC.	0.: N						
Conection and Treating	ent System Red	·	C. LANDFILL GAS I			[
G ALTER A			C. LANDFILL GAS	CIILIZA	1101					
Current Utilization:	C									
Utilization System		Operational	T. ·							
Utilization System		Reciprocatin	g Engine							
Utilization System		1993								
Electric Utility Pr										
Natural Gas Provi										
Energy Purchaser	r(s):	Virginia Ele	ctric & Power Co							
Capacity:		Electrici	ty Generation Project ((MW)	C)R	Direct Us	e Project (mml	Btu/hr)	
Estimated Potenti	ial Capacity:									
Current Capacity:				2.9						19
Planned Capacity										
Utilities in County:		Southeastern	Power Admin; Virgin	nia Electric	& Po	wer Co				
			RONMENTAL BENE							
		D. LIVII						C	-4	
Methane Reduction (to			I	Potential				Currei	ıι	
	• .									
CO2 Equivalent of CH	4 Reauction (to	ns/yr):								
Emissions Avoided by	Fossil Fuel Dis	placement:	Electricity Ge	eneration I	Projec	rt		Direct Use P	roject	
·			CO2 (tons/yr)	SO)2 (ton	ıs/yr)	CO2	(tons/yr)	-	(tons/yr)
		Coal:	, ,			• /				
		Fuel Oil:								
	Λ	latural Gas:								
		7 1011	E. CONTACT INF	ORMATI	ON		- 1011			
		Landfill	Owner				Landfill	l Operator		
Contact Name:										
Mailing Address:										
Phone Number:										
Fax Number:										

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 22



Petersburg City LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: City of Petersburg Annual Acceptance Rate (tons): 57,200 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Petersburg Acres Currently Landfilled (acres): 75 County: Petersburg Average Depth (feet): State: VA Waste-in-Place (tons): 1.144.000 Year Open: 1977 1,144,000 1998 Waste-in-Place (tons): Year Closed: 2002 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): 0.71 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Unknown Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) 2 Estimated Potential Capacity: 22 Current Capacity: Planned Capacity: Southeastern Power Admin; Southside Electric Coop Inc; Virginia Electric & Power Co Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 4,108 0 CO2 Equivalent of CH4 Reduction (tons/yr): 86,276 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 17,364 110 12,372 113 Fuel Oil: 59 14,252 92 10,154 Natural Gas: 0 0 9.583 6,828 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Charles Dane Charles Dane Mailing Address: 390 Industrial Drive 390 Industrial Drive Phone Number: 804-733-2417 804-733-2417 Fax Number:



			SPSA Regional	LF		Landfill Cate	gory: Current
		A. G]	ENERAL LANDFILL IN	FORMAT	ION		
Landfill Owner:	SPSA		An	nual Accep	tance Rate (tor	ns):	410,000
Landfill Owner Type:	Public		Ye	ar Annual A	acceptance Rat	te Reported:	1998
Alternative Landfill Na	ame: Suffolk	Regional LF	De	sign Capaci	ty (tons):		
City:	Suffolk	<u> </u>	Ac	res Currentl	y Landfilled (a	acres):	308
County:			Av	erage Deptl	(feet):		140
State:	VA		19	98 Waste-ii	n-Place (tons):		6,357,700
Year Open:	1985		199	98 Waste-in	-Place (tons):		6,357,700
Year Closed:	2015						
		I	B. LANDFILL GAS COL	LECTION			
Estimated Methane Ge	neration (mmsc	f/d):		2.04			
LFG Collection Syster	n Status:		Oper	ational			
Current LFG Collected	l (mmscf/d):			1.8			
Collection and Treatme	ent System Requ	uired Under NSP	S/EG:	Yes			
	<u> </u>		C. LANDFILL GAS UTI	LIZATION			
Current Utilization:							
Utilization System	n Status:	Operational					
Utilization System		Reciprocatin	a Engina				
_	• •	1995	g Eligilie				
Utilization System							
Electric Utility Pr		Virginia Pov					
Natural Gas Provi	* *	Commonwe					
Energy Purchaser	(s):	Virginia Pov	ver				
Capacity:		Electrici	ty Generation Project (MW	<i>y</i>) (OR D	Direct Use Project (mm	Btu/hr)
Estimated Potenti	al Capacity:			6			64
Current Capacity:				3.2			38
Planned Capacity	:						
Utilities in County:		Southeastern	Power Admin; Virginia E	lectric & Po	wer Co		
		D. ENVIR	RONMENTAL BENEFIT	S OF UTI	LIZATION		
			Potei			Curre	nt
Methane Reduction (to	ns/vr)·		1 0101	ıııcıı	11,818	Curre	6,938
CO2 Equivalent of CH	• .	ns/vr)·		,	248,184		145,696
CO2 Equivalent of CII	- Reduction (to	1137 yr).			240,104		145,070
Emissions Avoided by	Fossil Fuel Dis _l	placement:	Electricity Genera	ation Projec	rt	Direct Use I	Project
			CO2 (tons/yr)	SO2 (tot	is/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	50,514		319	35,589	324
		Fuel Oil:	41,459		267	29,210	170
	N	latural Gas:	27,878		0	19,641	0
			E. CONTACT INFORM	MATION			
		Landfill (VIZITION		Landfill Operator	
Contact Name:	Dan Miles			Dan N	Miles		
	Dan Wiles						
Mailing Address:	723 Woodlake			723 W	oodlake Drive	2	
Phone Number:	757-420-4700			757 4	20-4700		
	131-440-4100			131-4	∠U- 1 / UU		
Fax Number:							



			SPSA Regional L	F	Landfill Catego	orv: Current	
		A. G	ENERAL LANDFILL INI			. ,	
Landfill Owner: SPSA Annual Acceptance Rate (tons): 410,000							
Landfill Owner Type:	Public			r Annual Acceptance		1998	
Alternative Landfill N		Regional LF		gn Capacity (tons):	Rate Reported.	1770	
City:	Suffolk	-		es Currently Landfille	ed (acres):	308	
_	- · · · · · · · · · · · · · · · · · · ·				cu (acres).	140	
State:	County: State: VA			Average Depth (feet): 1998 Waste-in-Place (tons):			
	1985			`	,	6,357,700	
Year Open:			1996	8 Waste-in-Place (tor	us):	6,357,700	
Year Closed: 2015 B. LANDFILL GAS COLLECTION							
Estimated Methane Ge	maration (mmsc			2.04			
LFG Collection System		<i>j/u)</i> .		2.04			
Current LFG Collected				1.8			
Collection and Treatm		uirad Undar NCI	00/EC.	Yes			
Collection and Treatm	em System Req		C. LANDFILL GAS UTIL				
			c. LANDFILL GAS CITE	IZATION			
Current Utilization:							
Utilization Syster		Operational					
Utilization Syster	• 1	Leachate Ev	aporation				
Utilization Syster		1995					
Electric Utility Provider(s): Virginia Power							
Natural Gas Prov	* *	Commonwe					
Energy Purchaser	(s):	Virginia Pov	ver				
Capacity:		Electrici	ty Generation Project (MW)	OR	Direct Use Project (mmBt	u/hr)	
Estimated Potenti	al Capacity:			6		64	
Current Capacity:						38	
Planned Capacity							
Utilities in County:							
Othities in County.		D ENIM			· ·		
		D. ENVII	RONMENTAL BENEFITS				
			Potential		Current		
Methane Reduction (to	• .			11,818		6,938	
CO2 Equivalent of CH	4 Reduction (to	ns/yr):		248,184		145,696	
Emissions Avoided by Fossil Fuel Displacement:			Electricity Genera	Direct Use Pro	Direct Use Project		
Zinissions Hvotaca by	r ossii r iici Disp	succineni.	CO2 (tons/yr) SO2 (tons/yr)		CO2 (tons/yr)	SO2 (tons/yr)	
		Coal:	50,514	319	35,589	324	
		Fuel Oil:	41,459	267	29,210	170	
		·	0	19,641	0		
Natural Gas:			27,878		19,041	0	
E. CONTACT INFORMATION Landfill Owner Landfill Operator							
Contact Name	5 150	Landini	Owner		Landini Operator		
Contact Name:	Dan Miles			Dan Miles			
Mailing Address:				723 Woodlake I			
	723 Woodlake						
Phone Number:	757-420-4700			757-420-4700			
Fax Number:							
1 an inuliioci.							



Shoosmith Richmond Area LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 143,000 Landfill Owner Type: Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Chester Acres Currently Landfilled (acres): 150 County: Chesterfield Average Depth (feet): State: VA Waste-in-Place (tons): 3,003,000 Year Open: 1976 3,003,000 1998 Waste-in-Place (tons): Year Closed: **B. LANDFILL GAS COLLECTION** 1.19 Estimated Methane Generation (mmscf/d): LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Planned Direct Thermal Utilization System Type:

Utilization System Start Year: 1999

Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):

Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)

Estimated Potential Capacity: 4 37

Current Capacity:

Planned Capacity:

Utilities in County:

Southeastern Power Admin; Southside Electric Coop Inc; Virginia Electric & Power Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION						
	Potential		Current			
Methane Reduction (tons/yr):		6,857	0			
CO2 Equivalent of CH4 Reduction (tons/yr):		144,005	0			
Emissions Avoided by Fossil Fuel Displacement:	Electricity Generation Project		Direct Use Project			
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)		
Coal:	29,203	185	20,650	188		
Fuel Oil:	23,969	154	16,949	99		
Natural Gas:	16,117	0	11,397	0		

Landfill Owner	Landfill Operator

Contact Name:	Tom Gorzycki	James McCook		
Mailing Address:	11800 Lewis Road	11800 Lewis Road		
Phone Number: Fax Number:	804-748-5823	804-748-5823		

E. CONTACT INFORMATION

^{*} Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 26



STAR Version 1.0 / LMOP

Smith Gap Regional Landfill Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Roanoke Valley RA Annual Acceptance Rate (tons): 228,800 Landfill Owner Type: Public Year Annual Acceptance Rate Reported: Alternative Landfill Name: Roanoke Valley SLF Design Capacity (tons): City: Roanoke Acres Currently Landfilled (acres): County: Roanoke Average Depth (feet): State: VA Waste-in-Place (tons): 5.262,400 Year Open: 1974 5,262,400 1998 Waste-in-Place (tons): Year Closed: 1995 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): 1.76 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Potential Utilization System Type: Reciprocating Engine Utilization System Start Year: Electric Utility Provider(s): AEP Natural Gas Provider(s): Energy Purchaser(s): AEP Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 6 55 Current Capacity: Planned Capacity: Appalachian Power Company; Craig-Botetourt Electric Coop; Southeastern Power Admin Utilities in County: D. ENVIRONMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 10,199 0 CO2 Equivalent of CH4 Reduction (tons/yr): 214.171 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 43,410 274 30,712 279 Fuel Oil: 229 35,629 25,207 147 Natural Gas: 23,958 0 16,949 0 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: John Hubbard Mailing Address: 1020 Hollins Road Phone Number: 540-857-5050 540-857-5050 Fax Number:



		V	/irginia Beach LF #2 M	Iount Tras	hmore II	Landfill Ca	tegory:	Candidate
A. GENERAL LANDFILL INFORMATION								
Landfill Owner: Landfill Owner Type:				Annual Acceptance Rate (tons): 286,00 Year Annual Acceptance Rate Reported:				286,000
Alternative Landfill N				•				
City:	Virginia Beach			Acres Currently Landfilled (acres): 232				
County:	Virginia Beach			• · · · · · · · · · · · · · · · · · · ·				100
State:	VA			1994 Waste-in-Place (tons):				6,572,000
Year Open:	1983			1998 Waste-in-Place (tons):				6,572,000
Year Closed:	ar Closed: 2015							
]	B. LANDFILL GAS (COLLECT	ΓΙΟΝ			
Estimated Methane Ge	Estimated Methane Generation (mmscf/d): 2.10							
LFG Collection Syster	n Status:		(Operationa	.1			
Current LFG Collected	d (mmscf/d):			1	5			
Collection and Treatm	ent System Requ			N				
		(C. LANDFILL GAS	UTILIZA	TION			
Current Utilization:								
Utilization Syster	n Status:	Planned						
Utilization Syster	n Type:	High Btu						
Utilization Syster	n Start Year:	1999						
Electric Utility Pr	rovider(s):							
Natural Gas Prov	ider(s):							
Energy Purchaser	r(s):							
Capacity:		Electrici	ty Generation Project ((MW)	OR	Direct Use Project (mr	nBtu/hr)
Estimated Potenti	ial Capacity:			7				66
Current Capacity:								
Planned Capacity:								31
Utilities in County:		Southeastern	n Power Admin; Virgir	nia Electric	2 & Power Co			
,			RONMENTAL BENE			I		
		D. EIVII			CILIZATION			
Madama Daladan (4)	()		I	Potential	12 125	Curr	ent	£ 790
Methane Reduction (to	• .				12,135			5,782
CO2 Equivalent of CH	4 Reduction (to	ns/yr):			254,841			121,414
Emissions Avoided by	Fossil Fuel Disp	olacement:	Electricity Generation Project		Direct Use Project			
			CO2 (tons/yr) SO2 (tons/yr)		CO2 (tons/yr) SO2 (tons/yr)			
		Coal:	52,092		329	36,544		333
Fuel Oil:			42,755		275	29,993		175
Natural Gas:			28,749)	0	20,168		0
E. CONTACT INFORMATION								
Landfill Owner Landfill Operator								
Contact Name:	, City Manage	r						
36.71					D	11' 337 1		
Mailing Address:	Municipal Cen	ter			Department of Pu	IDIIC WORKS		
Phone Number:	804-427-4242				804-430-2450			
Fax Number:	3322.2				33 = .00			
rax mulliber.								

